

CAMP NEEWAHLU (PWSNO 1280032) SOURCE WATER ASSESSMENT REPORT

11/20/2001



State of Idaho Department of Environmental Quality

Disclaimer: This publication has been developed as part of an informational service for the source water assessments of public water systems in Idaho and is based on data available at the time and the professional judgement of the staff. Although reasonable efforts have been made to present accurate information, no guarantees, including expressed or implied warranties of any kind, are made with respect to this publication by the State of Idaho or any of its agencies, employees, or agents, who also assume no legal responsibility for the accuracy of presentations, comments, or other information in this publication. The assessment is subject to modification if new data is produced.

SOURCE WATER ASSESSMENT FOR CAMP NEEWAHLU

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within the well recharge zone, your water quality history, construction characteristics associated with your well or wells, and site specific sensitivity factors associated with the aquifer your water is drawn from.

This report, *Source Water Assessment for Camp Neewahlu* describes the public drinking water source, potential contaminant sites located within a 1000-foot boundary around the drinking water source, and the susceptibility (risk) that may be associated with any potential contaminants. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Potential Contaminant Inventory. The Camp Neewahlu public water system, located on Kidd Island Bay on Lake Coeur d'Alene in Kootenai County, Idaho, has 9 connections serving a seasonal facility owned by the Inland Empire Council of Camp Fire USA. The camp was built in 1955 and originally used lake water for domestic use. A well was drilled in 1982 and deepened in 1983 to provide potable water for the camp. The estimated capacity of the deepened well was 100 GPM when it was drilled. It was off line in 1999 because of pump problems but was operating during the 1999, 2000 and 2001 seasons. The recharge zone for the well was modeled as 1000-foot radius circle with the well as its center.

Potential contaminant sources documented inside the well recharge zone include the surface waters of Lake Coeur d'Alene 45 feet from the well, and septic system components.

Water Quality History. Camp Neewahlu, under regulation as a non-community transient public water system, is required to monitor quarterly for bacterial contamination. Total coliform bacteria were present in samples tested in September and October 2000, but were absent when the water was tested in November 2000 and June 2001. Treatment of the water is not required. Nitrates have not been detected in any of the samples from the Neewahlu well since annual testing began in 1996.

Well Construction. The Camp Neewahlu well was drilled in 1982 to a depth of 250 feet. The estimated capacity of the well at that time was 30 GPM, with the static water level 40 feet below the surface. As originally constructed, the 6-inch steel casing extended from 2 feet above ground to 225 feet below. The puddling clay surface seal is 25 feet deep. The well is drilled into a granite formation.

In 1983 the well was deepened to 310 feet. The capacity of the well was estimated to be between 75 and 100 GPM, and the static water level rose to 5 feet below the surface.

A sanitary survey conducted September 10, 1999, found the water system to be mostly in compliance with *Idaho Rules For Public Drinking Water Systems*. Recommended repairs were completed in the spring of 2001.

Well Site Characteristics. Soils in the well recharge zone are predominately in the moderately well to well drained class. Soils that drain less rapidly protect against migration of contaminants toward the well. The soil structure above the water table in the well is decomposed granite for the first 20 feet, and granite from 20 feet down.

Susceptibility to Contamination. A susceptibility analysis DEQ conducted on the Camp Neewahlu well, incorporating information from the public water system file and the potential contaminant inventory, found the well to be at high risk for microbial contamination because of the proximity of the well to the lake. The well is at moderate risk for inorganic chemical (IOC) contamination. The risk for volatile organic chemical (VOC) or synthetic organic chemical (SOC) contamination is low. Natural risk factors associated with the geology of the well site added the most points to the final susceptibility scores. The susceptibility analysis worksheet for your well on page 6 of this report shows how your well was scored. Formulas used to compute the final susceptibility scores are at the bottom of the worksheet.

Source Water Protection. This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Camp Neewahlu source water protection activities should focus first on the improvements outlined in the 1999 sanitary survey. Repairing the broken electrical conduit and venting the well properly is particularly important for blocking the entrance of surface microbial contaminants into the well. Repairing the reservoir as outlined in the survey will help prevent microbial contamination of the distribution system. The camp also needs to test the well to determine whether the surface waters of Lake Coeur d’Alene influence it.

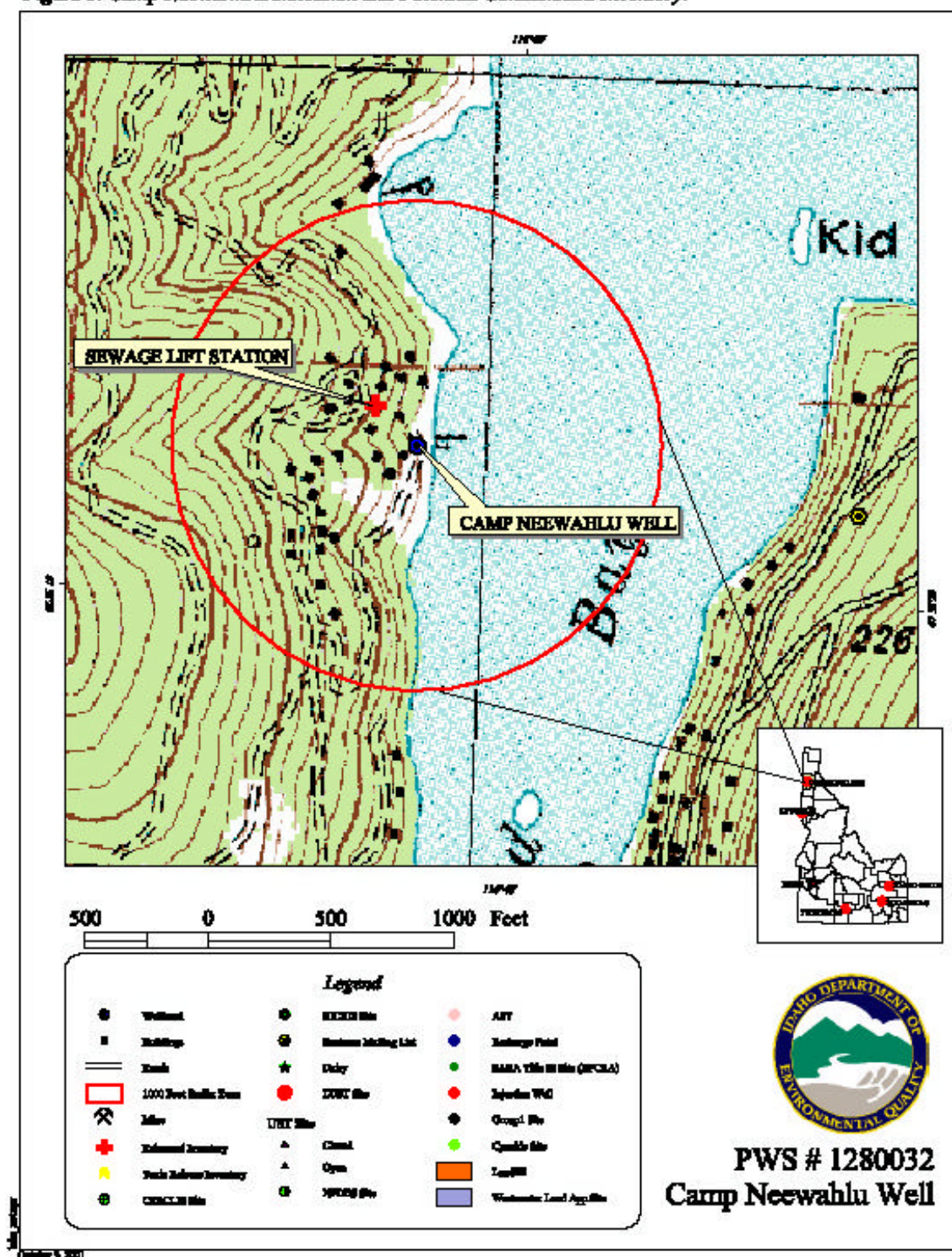
Ground water stewardship should be incorporated into the activity curriculum for campers of all ages. Because the water system may not have direct jurisdiction over the entire recharge zone for its well, it will be important to form partnerships with neighbors, and public agencies to regulate land uses that can degrade ground water quality. The goal of drinking water protection is to maintain current water quality for the future despite the changes we can expect with population growth in North Idaho.

For assistance in developing drinking water protection strategies please contact Sheila Bruning or Shantel Aparicio at the Coeur d'Alene Regional DEQ office, (208) 769-1422.

DEQ website:

<http://www.deq.state.id.us>

Figure 1. Camp Neewahlu Delineation and Potential Contaminant Inventory.



Ground Water Susceptibility

Public Water System Name :

CAMP NEEWAHLU CAMP FIRE

Well# :

WELL #1

Public Water System Number :

1280032

10/4/01 3:27:11 PM

1. System Construction			SCORE			
Drill Date	4/18/83					
Driller Log Available	YES					
Sanitary Survey (if yes, indicate date of last survey)	1999					
Well meets IDWR construction standards	YES		0			
Wellhead and surface seal maintained	YES		0			
Casing and annular seal extend to low permeability unit	YES		0			
Highest production 100 feet below static water level	YES		0			
Well located outside the 100 year flood plain	YES		0			
Total System Construction Score			0			
2. Hydrologic Sensitivity						
Soils are poorly to moderately drained	NO		2			
Vadose zone composed of gravel, fractured rock or unknown	NO		0			
Depth to first water > 300 feet	NO		1			
Aquitard present with > 50 feet cumulative thickness	NO		2			
Total Hydrologic Score			5			
3. Potential Contaminant / Land Use -SANITARY SETBACK ZONE (50' RADIUS AROUND WELL)			IOC	VOC	SOC	Microbial
			Score	Score	Score	Score
Land Use Zone 1A	WOODLAND		0	0	0	0
Farm chemical use high	NO		0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	SURFACE WATER 45' FROM WELL		NO	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Sanitary Setback Zone			0	0	0	0
Potential Contaminant / Land Use -1000' WELL RECHARGE ZONE						
Contaminant sources present (Number of Sources)	YES	SEPTIC SYSTEM COMPONENTS	1	0	0	1
(Score = # Sources X 2) 8 Points Maximum			2	0	0	2
Sources of Class II or III leacheable contaminants or Microbials	YES		1	0	0	
4 Points Maximum			1	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO		0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land		0	0	0	0
Total Potential Contaminant Source / Land Use Score -1000' WELL RECHARGE ZONE			3	0	0	2
Cumulative Potential Contaminant / Land Use Score			3	0	0	2
4. Final Susceptibility Source Score			6	5	5	6
5. Final Well Ranking			Moderate	Low	Low	*High

*High due to presence of potential contaminant source in Sanitary Setback Zone.

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Ranking:

- 0 - 5 Low Susceptibility
6 - 12 Moderate Susceptibility
> 13 High Susceptibility

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.